



# Elicitation of Prior Knowledge: A Vital First Step for Engaging Pupils in Training

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## Authors' contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

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## ABSTRACT

The paper emphasizes the importance of understanding the prior knowledge of trainees as a pre-requisite for designing an effective training programme. Data on prior knowledge of trainees and their attitude towards extension services were elicited from 153 extension service providers (ESPs) of varied disciplines using a semi-structured interview schedule. The interview focussed on the extension advisory services and the agriculture extension policy in India. The results show that

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ESPs carried misconceptions and stereotyped opinions towards various aspects of the extension system. An effort was done by the researcher to address the popular misconceptions, debunk myths with truth and persuading the trainees towards delivering effective extension services well within the recommended resource availability.

*Keywords:* Prior knowledge; extension service provider; agriculture extension policy; extension services.

## 1. INTRODUCTION

Prior knowledge is among the most influential factors of learning [1]. Whilst most trainers believe that training refines the prior knowledge and adds value to the current understanding. A science of learning perspective mentions prior knowledge as central to organising and reassembling new information to make it meaningful [2]. By soliciting prior knowledge, we explore the extent of the trainee's knowledge, but not the nature of it; especially the misconceptions. Furthermore, from a constructivist perspective, it is only through initial elicitation that we can provide experiences to help trainees modify these misconceptions. With a little creative thought, there are more ways than you might imagine of achieving this. The present study highlights the prior knowledge of extension service providers on the agricultural extension policies and the extension services, aimed at fulfilling the pedagogical challenge for a trainer: to engage trainees in reactivating prior knowledge; and to assess the quality of their current understanding.

## 2. METHODOLOGY

Direct questioning of the audience during the start of session provides a valuable snapshot of the class's understanding. However, there remains the problem of hearing each individual voice. For this reason, demonstrating prior knowledge in a more visual way is always useful. With these facts, a self-assessment schedule was developed to capture the prior knowledge of extension service providers on the agriculture extension services in India. 153 extension service providers were randomly involved in the study among 280 registered trainees. To overcome the respondent burden, a brief interview schedule was designed resulting in higher completion rate. The responses received, were helpful for the presenter in chunking and prioritizing the content to ensure that the course was clutter-free and relevant.

## 3. RESULTS AND DISCUSSION

Effective lecturing is characterized by enthusiasm and expressiveness, clarity, and interaction (Wammes et al., 1997). Keeping the audience engaged and drawing their interest is the primary moto. In order to address the myths and misconceptions, address the issues, and engage them effectively in training, the prior knowledge was elicited by asking the following questions.

### 3.1 Is There an Agricultural Extension Policy in India?

53.59 per cent of the respondents agreed that there existed an agriculture extension policy in India. While the fact was, there is no agriculture extension policy in India. Often people carry preconceived notions towards certain things without proper knowledge. For a better understanding, these preconceived notions have to be dumped first. At this stage, audience must be encouraged to divest their preconceived notions and invest towards qualitative information. Such approach is also known to initiate an explanation seeking curiosity (ESC) among the audience [3]. The psychology of curiosity arises from the perception in gap of knowledge or understanding [4].

### 3.2 Is there a Need for Agriculture Extension Policy (AEP) in India? Do You Agree, an Absence of AEP Adversely Impacts Agricultural Development in India?

99.35 per cent of the respondents agreed to the need for agriculture extension policy in India. While, 96.08 percent even felt that the absence of AEP would adversely impact the agricultural development. Most audience were not even clear on the existence of agriculture extension policy but still made their opinion towards the need for AEP. There is a tendency among respondents to respond in a way it is deem to be more socially acceptable [5]. Such response bias is called

social desirability bias. Such behaviour is however known to reflect the integrity among the audience [6].

### **3.3 What are the Primary Responsibilities of an Extension Service Provider?**

84.97 per cent of the respondents opined transfer of technology was the primary duty of extension service provider. Followed by 64.05 per cent perceived ESP as a facilitator and 62.09 per cent perceived that ESP had a role in bringing desirable change in attitude of farmers. Elucidating the main role of an extension service provider may be difficult. The role played by an extension service provider is often situational, regional and even changes with the needs of community. The leadership styles also vary as per the situations [7]. However, the principal role of extension service provider is that of an educator [8]. Whether education is formal or informal the essential purpose of extension is to transfer technology from researchers to producers in whatever manner is most effective. The audience were highly convinced with this fact when the varied experiences of the author were shared with relevant data and photographs from varied situations.

### **3.4 Which is the Main Extension Agency at District Level?**

48.37 per cent of respondents opined Krishi Vigyan Kendra (KVK) as the main extension agency at district level, while 33.99 per cent opined Agricultural Technology Management Agency (ATMA) as the main agency. 17.65 per cent were of the opinion that Department of Agriculture (DoA) and Department of Animal Husbandry and Dairying (DAHD) was the main agency. There is a misconception among most extension service providers that KVK is an extension agency. But the very fact is that KVK is station for technology refinement and not an extension unit. ATMA is the primary extension agency at district level. However, every institution, irrespective of its primary mandates is involved in extension service delivery as an imbibed social responsibility in an agriculture development system. With the growth of multiple agencies involved in extension activities, often the extension service providers lack the knowledge of the basic purpose of the institutions. Drawing an understanding of such gaps unifies extension service providers and helps them understand the organisation's

direction. The trainer has a very important role in communicating all these components.

### **3.5 Do you Agree, Many Unskilled People are Engaged in Extension Service Delivery?**

75.82 per cent of participants opined that many unskilled people are engaged in extension service delivery. The question that arises here is, "who are the unskilled extension workers?" Arrays of people are involved in extension service delivery with different educational background, in varied job titles and with varied experiences. Anyone among them could turn out to be unskilled if they are not tuned to the changing needs and demands of the people. Extension profession is highly dynamic and one cannot be static imparting the same knowledge. Extension professionals are known to experience embarrassing situations where a farmer is more updated with a technology and innovations than an extension service provider. Thus, extension is a challenging profession requiring one to be more active and updated. Experiences of the author were presented, in which the author had played a role of a facilitator and in-turn had learnt much from the innovations of the farmers. Connections with a farmer is always bilateral.

### **3.6 Does the Mandate for Extension Service Delivery Sufficiently Converge with Your Job Profile?**

69.93 per cent of respondents opined that the mandate of extension service delivery sufficiently converged with their job profile. There is a long-standing debate on who are the extension service providers? The faculties of agriculture and allied universities are highly engaged in teaching and research with less inclination to extension. They believe, extension discipline in the university is responsible for undertaking the extension activities. While extension discipline itself is bound with teaching and research in extension education. However, there is a clear mandate that every faculty must equally contribute to teaching, research and extension in a university. In many other job titles, extension services are considered subsidiary to the primary job role. This conflict itself leads to the gap between a service provider and the farmer, where a service provider may find himself less capable to guide a farmer. Motivation stands the basic drive for the commitment of ESP towards extension services, irrespective of job titles.

Achievement motivation, job stress and in-service training accounts for 44.1 per cent change in role performance [9].

### **3.7 Are You Accountable for the Extension Service Delivery? and are You Burdened with Multiple Responsibilities Apart from Extension Service Delivery?**

84.97 respondents consider themselves accountable for the extension service delivery. 73.2 per cent of respondents opined that they were burdened with multiple responsibilities. As discussed earlier, extension services most of the time conflict with the job description. Burdened with other tasks to be fulfilled and with the complex reporting system, one hardly finds time to involve in an effective service delivery. However, it is to be noted that every extension service provider is accountable if his potentials were not effectively utilized on the service delivery.

### **3.8 Are You Equipped with the Extension Resources Required to Fulfil the Extension Service Goals?**

56.86 per cent of the respondents expressed the lack of resources hinder the extension services. Yes, adequate logistics are a must to boost the extension services. Lack of resources has always been a concern for effective service delivery [10]. However, the emphasis should be on what is attainable rather than on what is ideal, although one should not lose sight of the latter. Extension programmes should fix up priority on the basis of available resources and time. The rural people, especially in the developing countries, have multi problems. All these problems cannot be taken up at once for a solution, because of the limitations of trained people, lack of funds, facilities and many other resources. Time is also the most limiting factor. Neither the people nor the funding agencies can wait for an indefinite period of time to get the results. Considering all these parameters, it is advised to fix up essential priorities [11].

## **4. CONCLUSION**

One of the vital means of achieving success in training is creating associations within different aspects of learner's prior knowledge. It's the duty of a trainer to help the learners draw upon their prior knowledge or experience to understand,

discover similarities, and make sense of a new concept. Analogies and metaphors are effective instructional tools to draw similarities between two apparently dissimilar objects or ideas.

The present paper pushes us to understand when and how to elicit trainees' prior knowledge as a means of enhancing new learning, particularly among heterogenous trainees. In fact, many trainees were performing their duties without much knowledge about the system they were associated with. A person will be better motivated to his duties only when he has a clear understanding of the system he is associated with. This also necessitates reflection on the part of trainers on their roles and responsibilities towards fulfilling the gap needs. According to John Medina, the author of the fantastic book 'Brain Rules' says, our brains can be excited about learning something new and this lasts only for short duration. Thus, it is bound duty of every trainer to capitalise this period. Deficits in understanding of the trainees will always motivate in operating an effective training programme.

## **COMPETING INTERESTS**

Authors have declared that no competing interests exist.

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